

REMARKS

Claims 1-39 are currently pending in this application. Claims 5, 7, and 8 were amended herein. Applicant respectfully requests that the Examiner reconsider the rejections in light of the amendments and remarks made herein.

Miscellaneous

Claims 5, 7, and 8 were amended herein to correct the inadvertent error that changed the claim dependencies thereof. Applicant thanks the Examiner for noticing the inadvertent error that occurred in the previous amendment.

The amendment to the Specification was made to update information regarding the related application on page 1 of the specification.

Rejections under 35 U.S.C. § 102

Claims 12-17, 25-27, and 31-32 are rejected under 35 U.S.C. § 102(e) as being anticipated by Durocher, U.S. Patent No. 6,733,711. Applicant respectfully traverses this rejection.

The Office Action asserts that the encapsulating material **65** of Durocher is equivalent to the intermediate layer of claims 12 and 26 (November 14, 2006 Office Action, page 2). Durocher discloses, specifically, with respect to **FIG. 9** that the encapsulating material **65** is filled into the cavities **35** (Durocher, column 8, lines 30-32; and **FIG. 9**). Therefore, as seen from **FIG. 9**, the encapsulating material **65** covers one LED chip **59**.

In order to anticipate a claim, each and every element of that claim must be disclosed by a single reference. Claim 12 on which claims 13-17, 25 are dependent recites “an intermediate layer disposed between the LED **dies** and the couplers” (emphasis added) and specifies that there are two or more LED dies. Therefore, in order to anticipate claim 12, the reference must disclose a device having an intermediate layer disposed between two or more LED dies and the couplers. Similarly, claim 26, on which claims 27, 31, 32 are dependent recites “an intermediate layer disposed over the LED **dies**...” (emphasis added) and recites a plurality of LED dies. Therefore in order to anticipate claim 26, the reference must disclose a device having an intermediate layer disposed over the plurality of LED dies. Durocher does not disclose an intermediate layer that covers more than one LED die, and therefore it does not anticipate claims 12 and 26, or claims 13-17, 25, 27, 31, and 32 which are dependent thereon. Applicant therefore respectfully requests that this rejection be withdrawn.

Applicant also notes that claims 13-17, 25, 27, 31, and 32 provide further elements that may contribute to patentability. Applicant has not conceded that such further reasons do not exist by not raising them herein.

Rejection of Claims under 35 U.S.C. § 103

Claims 1-9, 11, 18-23, and 28-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Durocher, U.S. Patent No. 6,733,711 and further in view of Miller, U.S. Patent No. 6,155,699. Applicant respectfully traverses this rejection.

According to MPEP § 2142, three basic criteria must be met in order to establish a *prima facie* case of obviousness. First, the prior art reference (or references when combined) must teach or suggest all of the elements of the rejected claims. Second, there must be some suggestion or motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Third, there must be a reasonable expectation of success. Applicant respectfully submits that a *prima facie* case has not been established at least because the first two criteria have not been met.

Applicant respectfully submits that the combination of Durocher and Miller fail to disclose or suggest all of the elements of claims 1, 12, and 26, as well as claims 2-9, 11, 18-23, and 28-30 which are dependent thereon. Similar to claims 12 and 26 as discussed above, claim 1 recites “an intermediate layer disposed between the LED dies and the phosphor patches” and LED dies.

Applicant reiterates the comments offered above with respect to Durocher and further asserts that Miller also does not disclose a device that includes an intermediate layer disposed between the LED dies and the phosphor patches or an equivalent structure. Specifically, the Office Action states that the DBR mirror **30** of Miller is equivalent to the intermediate layer as recited in the currently pending claims. As seen in the cited **FIG. 2**, the DBR mirror **30** covers one LED die **12**. Miller describes that the DBR mirror **30** is formed over the upper surface of the encapsulating layer **28**, which is a dome-shaped structure that surrounds the die **12** (Miller, column 5, lines 25-40). Therefore Miller also does not disclose a structure that is equivalent to an intermediate layer that is disposed over the LED **dies** (emphasis added), as is currently claimed.

One of skill in the art would not have been motivated to modify the disclosures of Durocher and Miller, or the combination thereof by extending the encapsulating material of Durocher or the DBR mirror of Miller because such a modification would not work given the way in which the devices of Durocher and Miller function and are constructed.

Applicant respectfully submits that the rejection of claims 1-9, 11, 18-23, and 28-30 should be withdrawn because a *prima facie* case of obviousness has not and cannot be established. Applicant also notes that claims 2-9, 11, 18-23, and 28-30 provide further elements that may contribute to patentability. Applicant has not conceded that such further reasons do not exist by not raising them herein.

Claim 24 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Durocher, U.S. Patent No. 6,733,711, and further in view of Ota, U.S. Patent No. 6,943,380. Applicant respectfully traverses this rejection.

Applicant reiterates the comments offered above with respect to Durocher and respectfully submits that Ota fails to remedy the shortcomings of Durocher. Applicant also notes that claim 24 provides further elements that may contribute to patentability. Applicant has not conceded that such further reasons do not exist by not raising them herein. Applicant therefore respectfully requests that this rejection should be withdrawn.

Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Durocher, U.S. Patent No. 6,733,711, and Miller, U.S. Patent No. 6,155,699, and further in view of Ota, U.S. Patent No. 6,943,380. Applicant respectfully traverses this rejection.

Applicant reiterates the comments offered above with respect to Durocher and Miller, and respectfully submits that Ota fails to remedy the shortcomings thereof. Applicant also notes that claim 10 provides further elements that may contribute to patentability. Applicant has not conceded that such further reasons do not exist by not raising them herein. Applicant therefore respectfully requests that this rejection should be withdrawn.

Claims 33-39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimizu, U.S. Patent No. 6,949,772, and further in view of Miller, U.S. Patent No. 6,155,699. Applicant respectfully traverses this rejection.

Claim 33 recites that the intermediate layer is substantially transparent to LED light; and that the intermediate layer is positioned over the LED dies (emphasis added). The portion of Shimizu that is transparent is the resin 24 (Shimizu, column 2, lines 13-16), however, the resin 24 is not positioned over the LED dies, the substrate 23 is positioned over the LED dies. As discussed above, Miller does not disclose an intermediate layer that is disposed on LED dies, and therefore, it does not disclose positioning such a layer.

Because the combination of Shimizu and Miller fail to disclose or suggest all of the elements of claim 33, and also therefore claims 34-39 which are dependent thereon, claims 33-39 are not obvious in view of Shimizu and Miller. Applicant also notes that claims 34-39 provide further elements that may contribute to patentability. Applicant has not conceded that such further reasons do not exist by not raising them herein. Applicant therefore respectfully requests that this rejection should be withdrawn.

Conclusion

Applicant also notes that there may be other arguments which were not presented herein, and Applicant does not concede those arguments by not having presented them herein. Applicant also does not necessarily agree with the correctness of statements made in the Office Action that were not rebutted herein.

In view of the foregoing amendments, Applicants respectfully request reconsideration and allowance of the claims as all rejections have been overcome. Early notice of allowability is kindly requested.

The Examiner is respectfully requested to contact the undersigned by telephone at 651-733-6750 with any questions or comments.

Please grant any extension of time, if necessary for entry of this paper, and charge any fee due for such extension or any other fee required in connection with this paper to Deposit Account No. 13-3723

Fees

- ☒ Any required fee will be made at the time of submission via EFS-Web. In the event fees are not or cannot be paid at the time of EFS-Web submission, please charge any fees under 37 CFR § 1.17 which may be required to Deposit Account No. 13-3723.
- ☐ Please charge any fees under 37 CFR §§ 1.16 and 1.17 which may be required to Deposit Account No. 13-3723. (One copy of this sheet marked duplicate is enclosed.)
- ☒ Please charge any additional fees associated with the prosecution of this application to Deposit Account No. 13-3723. This authorization includes the fee for any necessary extension of time under 37 CFR § 1.136(a). To the extent any such extension should become necessary, it is hereby requested.
- ☒ Please credit any overpayment to the same deposit account.

Respectfully submitted,

Date

February 14, 2007

By

Jay R. Pralle

Jay R. Pralle, Reg. No.: 52,131
Telephone No.: 651-733-6750

Office of Intellectual Property Counsel
3M Innovative Properties Company
Facsimile No.: 651-736-3833